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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/486,784	03/01/2000	RALF DONNER	4797-8PUS	2441

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EXAMINER	
RIDLEY, BASIA ANNA	
ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/486,784

Applicant(s)

DONNER ET AL.

Examiner

Basia Ridley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7,9,11,13,15,17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7,9,11,13,15,17 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 7, 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gudymov et al. (FR 2,569,827) in view of Kummel et al. (USP 4,188,915).

Regarding claim(s) 7, Gudymov et al. discloses an appliance for gasification of carbon containing fuel comprising:

- a reaction chamber (Fig. 1) having a contour delimited by a cooled reactor wall of the following structure from the outside inward:
  - a pressure shell (2,4,6);
  - a water-cooled cooling gap (Fig. 1);
  - a cooling wall (1,3,5) arranged inside the pressure shell (2,4,6);
  - the water cooled cooling gap being defined between the pressure shell (2,4,6) and the cooling wall (1,3,5); said cooling wall (1,3,5) comprising a wall including pins (7, 8) penetrating into a ceramic refractory lining (19); and
  - the ceramic refractory lining (19).

While Gudymov et al. does not explicitly disclose said cooling wall comprising a metal wall, as the reference discloses that said wall and the pins are connected by welds (9), therefore said cooling wall inherently, comprises a metal wall.

The reference does not explicitly disclose the cooling wall having ceramic protection layer of ceramic mass having high thermal conductivity arranged on a side of the cooling wall

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facing away from the cooling gap.

Kummel et al. teaches that it is desired to arrange a protective layer of ceramic (36) between the cooling wall (37) and the refractory lining (40) to protect the cooling wall and provide rough surface for the slag to adhere to when the refractory lining has been lost during operation (C2/L10-37 and C4/L19-C5/L5).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to cover the cooling wall of the appliance of Gudymov et al. with a ceramic layer, as taught by Kummel et al. for the purpose of protecting the cooling wall and providing rough surface for the slag to adhere when the refractory lining has been lost during operation.

Regarding claim 13, Gudymov et al. in view of Kummel et al. disclose all of the claim limitations as set forth above. Additionally, Gudymov et al. discloses the appliance wherein:

- the cooling wall has geometric shapes (Fig. 2);

Regarding claim 17, Gudymov et al. in view of Kummel et al. disclose all of the claim limitations as set forth above. Additionally, Gudymov et al. discloses the appliance wherein the pressure shell is connected to the cooling wall at the input and the outlet opening (Fig. 1) and Kummel et al. discloses the appliance wherein the protective layer facilitates cooling of the layer of slag and/or refractory lining (Fig. 1).

Regarding limitations recited in claims 7, 13 and 17 which are directed to a manner of operating disclosed appliance, the examiner notes that neither the manner of operating a disclosed device nor material or article worked upon further limit an apparatus claim. Said limitations do not differentiate apparatus claims from prior art. See MPEP § 2114 and 2115.

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Further, the examiner notes that process limitations do not have patentable weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states “Expressions relating the apparatus to contents thereof and to an intended operation are of no significance in determining patentability of the apparatus claim.”

3. Claims 9, 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gudymov et al. (FR 2,569,827) in view of Kummel et al. (USP 4,188,915), as applied to claims 6-7 above, and further in view of Price (USP 2,231,295).

Regarding claims 9 and 15, Gudymov et al. in view of Kummel et al. disclose all of the claim limitations as set forth above. Additionally, Gudymov et al. discloses the cooling wall being pinned and welded in an air tight manner (Abstract) and forming cooling jacket with fins, but the reference does not explicitly disclose the cooling wall comprising half tubes and being of undulating form.

Price establishes equivalency of cooling gas passages having various shapes e.g. cooling jackets and half tubes (Fig. 4-5). As instant specification is silent to unexpected results, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the cooling jacket of Gudymov et al. with half pipe passages, since such modification would have involved a mere substitution of known equivalent structures. A substitution of known equivalent structures is generally recognized as being within the level of ordinary skill in the art.

Regarding claim 11, the recitation of a method in which said layer of ceramic mass is made, the examiner notes that the determination of patentability is determined by the recited structure of the apparatus and not by a method of making said structure. A claim containing a recitation with respect to the manner in which a claimed apparatus is made does not differentiate

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the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim.

Regarding limitations recited in claims 9, 11 and 15 which are directed to a manner of operating disclosed appliance, the examiner notes that neither the manner of operating a disclosed device nor material or article worked upon further limit an apparatus claim. Said limitations do not differentiate apparatus claims from prior art. See MPEP § 2114 and 2115. Further, the examiner notes that process limitations do not have patentable weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states “Expressions relating the apparatus to contents thereof and to an intended operation are of no significance in determining patentability of the apparatus claim.”

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gudymov et al. (FR 2,569,827) in view of Kummel et al. (USP 4,188,915), further in view of Price (USP 2,231,295), as applied to claims 15 above, and further in view of Matsugi et al. (USP 5,667,758).

Regarding claim 18, Gudymov et al. in view of Kummel et al. and further in view of Price disclose all of the claim limitations as set forth above. While Price discloses that the undulating metal wall is semi-circularly shaped, the reference does not explicitly disclose the undulating form of the metal wall being one of trapezium-shaped, triangular-shaped, and rectangular-shaped.

Matsugi et al. establishes equivalency of cooling metal walls having various shapes e.g. rectangular, polygonal, circular and semi-circular (C4/L58-65). As instant specification is silent to unexpected results, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the semicircular wall with one having trapezium-shape, triangular-

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shape, or rectangular-shape, since such modification would have involved a mere substitution of known equivalent structures. A substitution of known equivalent structures is generally recognized as being within the level of ordinary skill in the art.

Regarding limitations recited in claim 18 which are directed to a manner of operating disclosed appliance, the examiner notes that neither the manner of operating a disclosed device nor material or article worked upon further limit an apparatus claim. Said limitations do not differentiate apparatus claims from prior art. See MPEP § 2114 and 2115. Further, the examiner notes that process limitations do not have patentable weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states "Expressions relating the apparatus to contents thereof and to an intended operation are of no significance in determining patentability of the apparatus claim."

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

#### ***Response to Arguments***

6. Applicant's arguments filed on 3 December 2004 have been fully considered but they are not persuasive.

7. Applicant arguments that Gudymov et al. discloses that the entire apparatus is an internal

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lining, therefore there is no teaching that external shell is a pressure shell is not clear, because the reference clearly discloses other elements of the apparatus, such as, for example, cooling wall (1,3,5) or pins (7, 8) in addition to the ceramic refractory lining (19). Additionally, the examiner notes that since Gudymov et al. teaches that disclosed apparatus operates under high pressures (e.g. P6/L18-25), the outer shell, inherently, is a pressure shell.

8. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

9. The applicant argues that Gudymov et al. does not show the ceramic protection on the side of the cooling wall facing away from the cooling gap. In response the examiner notes that Gudymov et al. was not relied upon to teach the ceramic protection on the side of the cooling wall facing away from the cooling gap. The examiner has, however, relied upon the disclosure of Kummel et al., as set forth above, to teach the ceramic protection on the side of the cooling wall facing away from the cooling gap.

10. The applicant argues that Kummel et al. does not disclose cooling gap defined between a pressure shell around and a cooling wall. In response the examiner notes that Kummel et al. was not relied upon to teach cooling gap defined between a pressure shell around and a cooling wall. The examiner has, however, relied upon the disclosure of Gudymov et al., as set forth above, to teach the cooling gap defined between pressure shell around and a cooling wall.

11. The applicant argues that Kummel et al. discloses the ceramic coating either plasma or flame sprayed rather than pinned. This is not found persuasive. Kummel et al. was not relied

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upon to teach cooling wall comprising pins, as such wall is disclosed by Gudymov et al., as set forth above. Further it is not clear how the fact that the ceramic coating of Kummel et al. is flame sprayed distinguishes over the instantly claimed invention, since claim 11 of instant invention recites appliance wherein the thin layer of ceramic mass is a flame-sprayed layer on the cooling wall. To clarify her position, the examiner notes that since pins (7, 8) of Gudymov et al. penetrate all the way to ceramic refractory lining (as shown in Fig. 2), they will also penetrate into protecting ceramic layer arranged between the cooling wall and the refractory lining in the modified apparatus of Gudymov et al. in view of Kummel et al.

12. The applicant argues that Price does not show the ceramic protection on the side of the cooling wall facing away from the cooling gap. In response the examiner notes that Price was not relied upon to teach the ceramic protection on the side of the cooling wall facing away from the cooling gap. The examiner has, however, relied upon the disclosure of Kummel et al., as set forth above, to teach the ceramic protection on the side of the cooling wall facing away from the cooling gap.

### *Conclusion*

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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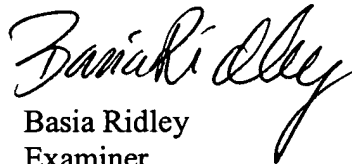
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Basia Ridley, whose telephone number is (571) 272-1453.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola, can be reached on (571) 272-1444.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Technical Center 1700 General Information Telephone No. is (571) 272-1700. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Questions on access to the Private PAIR system should be directed to the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).



Basia Ridley  
Examiner  
Art Unit 1764

BR  
March 7, 2005